FIG. 1

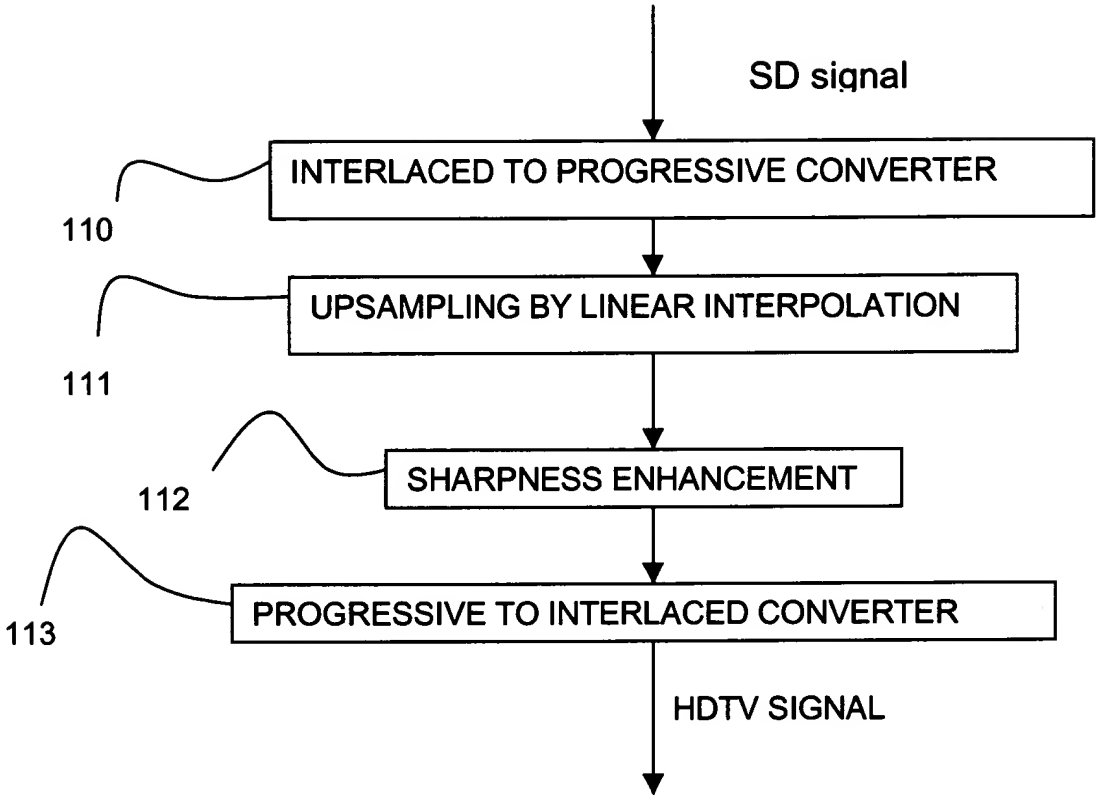
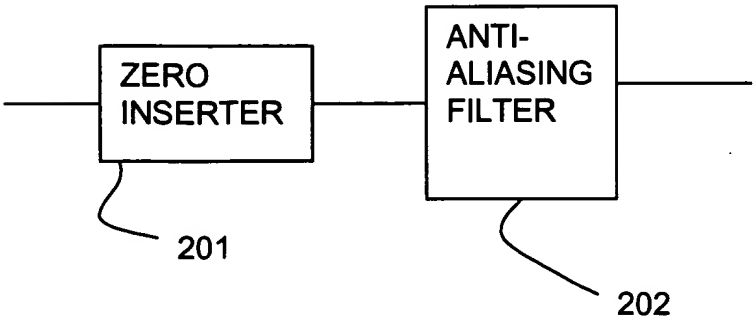

SD signal
INTERLACED TO PROGRESSIVE CONVERTER
110
UPSAMPLING BY LINEAR INTERPOLATION
111
SHARPNESS ENHANCEMENT
112
PROGRESSIVE TO INTERLACED CONVERTER
113
HDTV SIGNAL

FIG. 2


ZERO INSERTER
ANTI-ALIASING FILTER
201
202

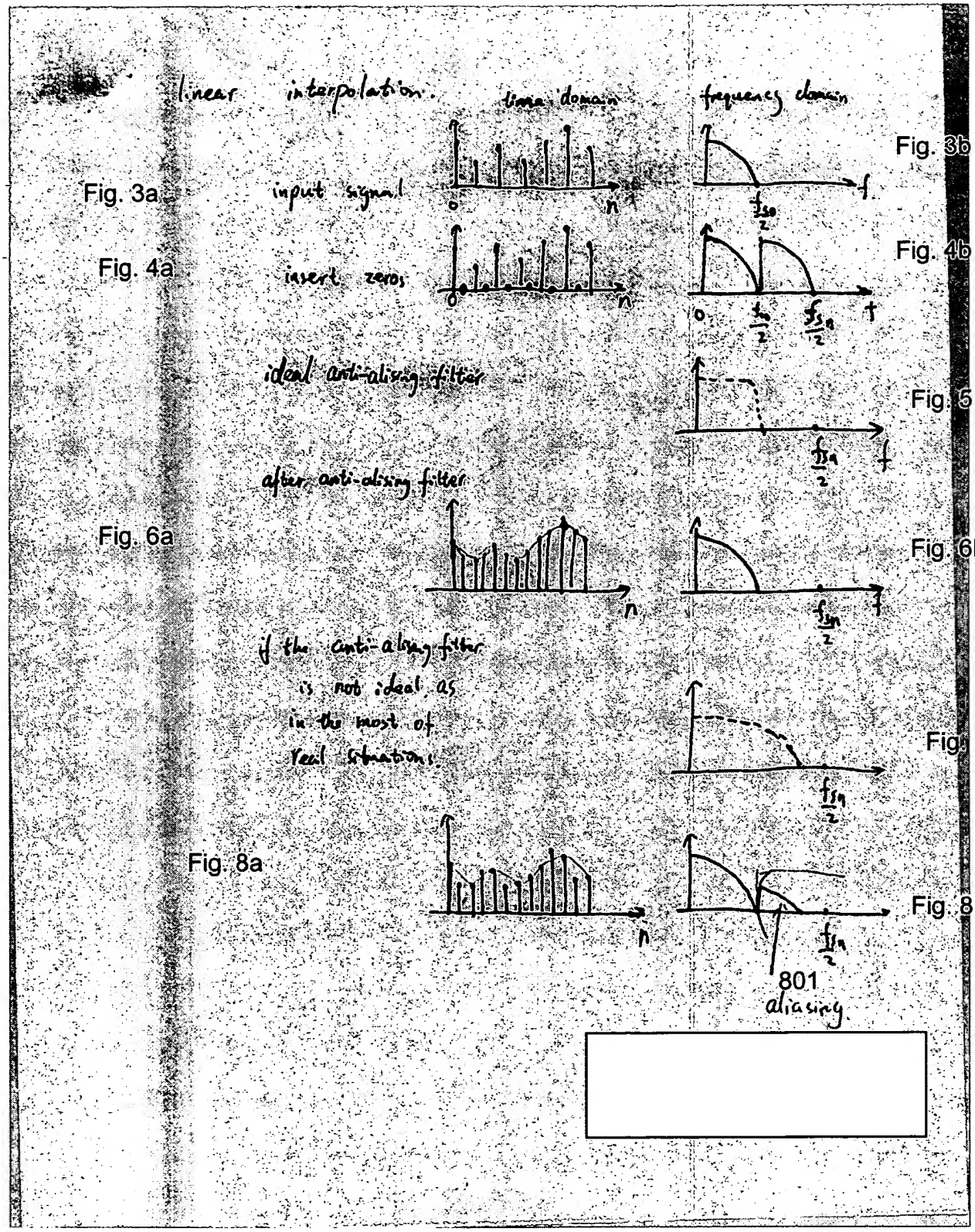


Fig. 3a

Fig. 3b

Fig. 4a

Fig. 4b

Fig. 5

Fig. 6a

Fig. 6b

Fig. 7

Fig. 8a

Fig. 8b

FIG. 9

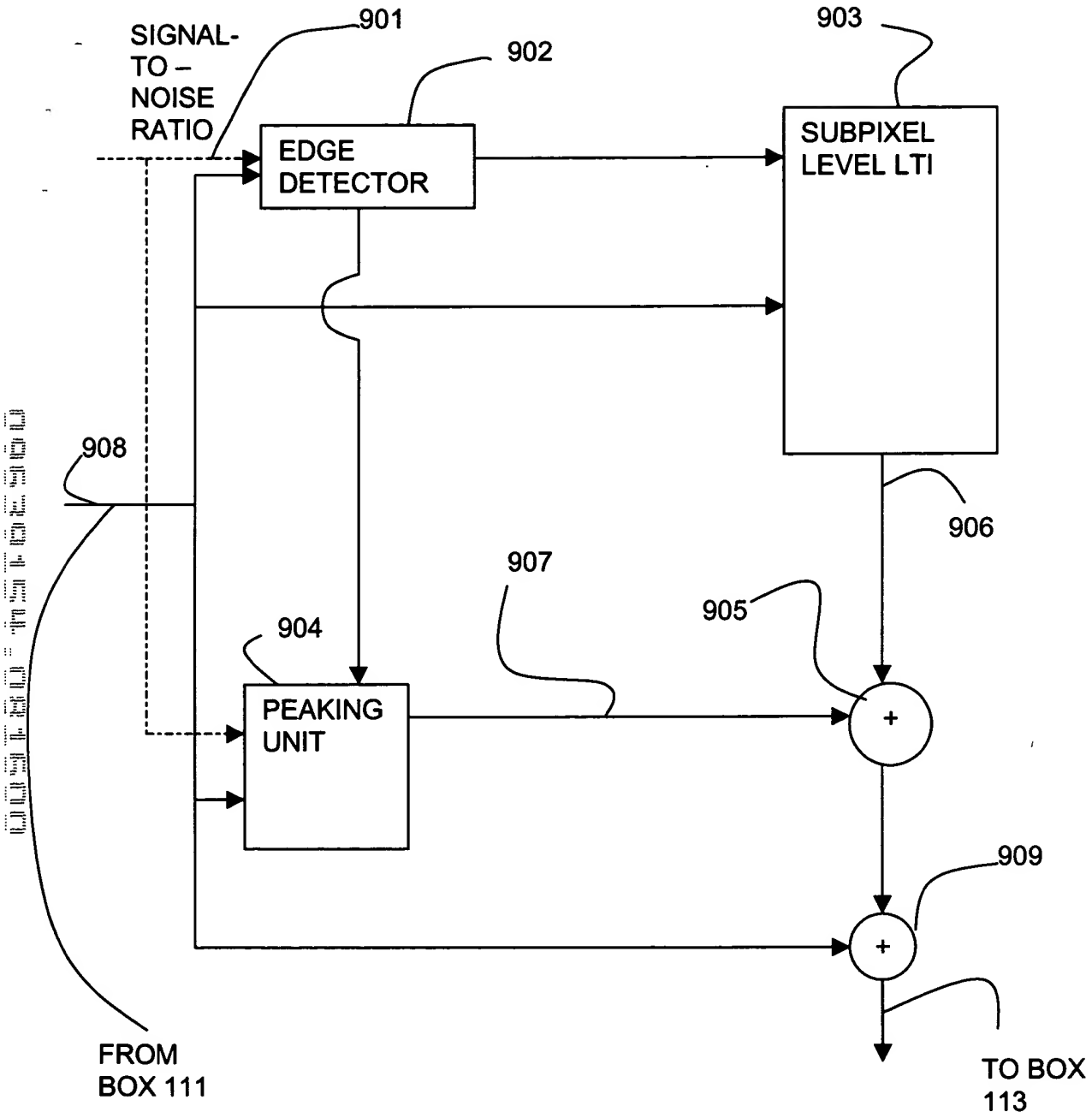

SIGNAL-
TO –
NOISE
RATIO
901
902
903
EDGE
DETECTOR
SUBPIXEL
LEVEL LTI
908
906
907
905
904
PEAKING
UNIT
+
909
+
FROM
BOX 111
TO BOX
113

Fig. 10

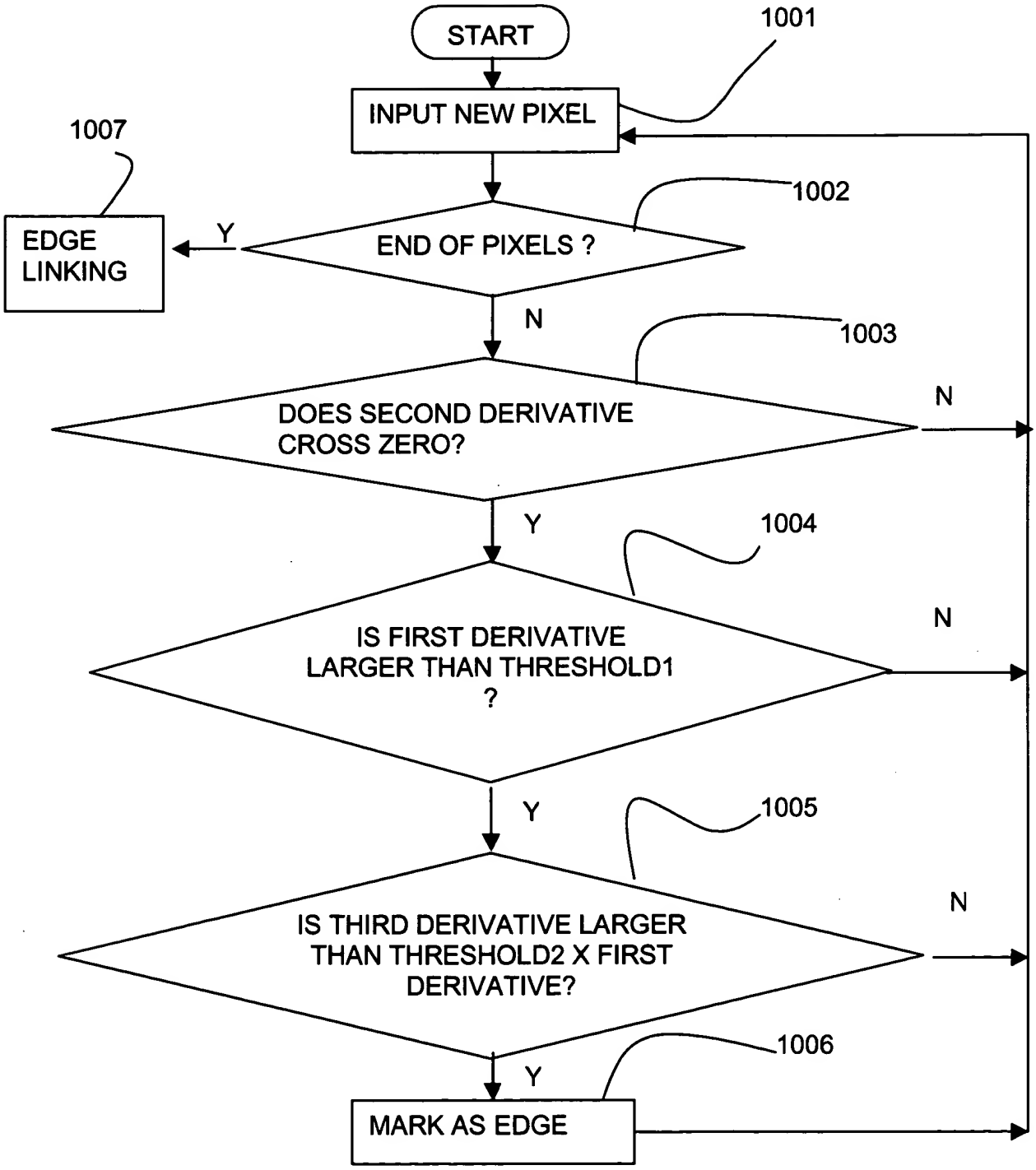

START
1001
INPUT NEW PIXEL
1007
EDGE LINKING
Y
1002
END OF PIXELS ?
N
1003
DOES SECOND DERIVATIVE CROSS ZERO?
N
Y
1004
IS FIRST DERIVATIVE LARGER THAN THRESHOLD1 ?
N
Y
1005
IS THIRD DERIVATIVE LARGER THAN THRESHOLD2 X FIRST DERIVATIVE?
N
Y
1006
MARK AS EDGE

FIG. 11

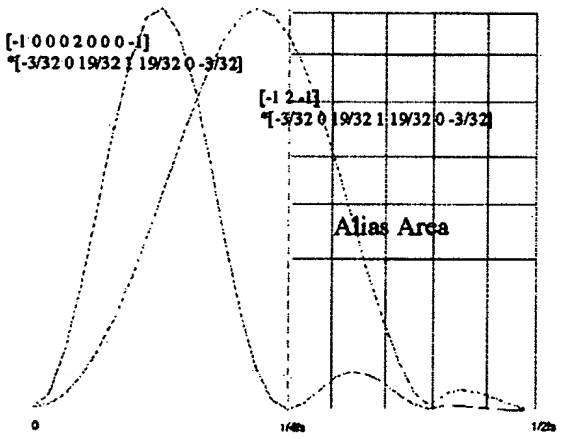

[-1 0 0 0 2 0 0 0 -1]
*[-3/32 0 19/32 1 19/32 0 -3/32]
[-1 2 -1]
*[-3/32 0 19/32 1 19/32 0 -3/32]
Alias Area
0
1/4fs
1/2fs

FIG. 12A

FIG. 12B

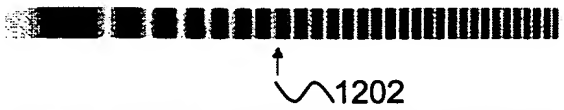
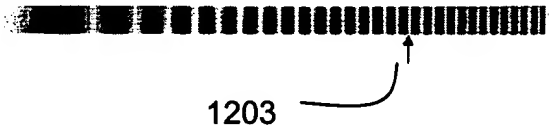


FIG. 12C



Rule 1

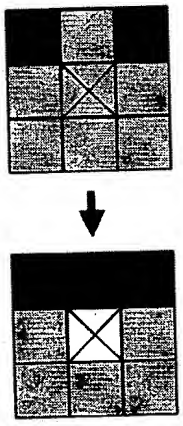


FIG. 13A

FIG. 13B

Rule 2

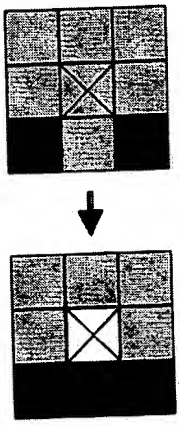


FIG. 13C

FIG. 13D

Rule 3

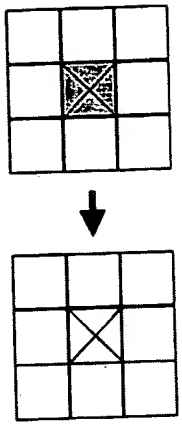


FIG. 13E

FIG. 13 F

Rule 1

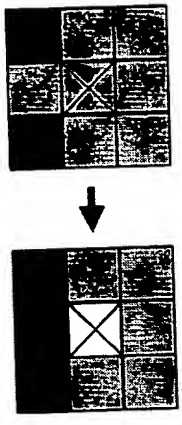


FIG. 14A

FIG. 14B

Rule 2

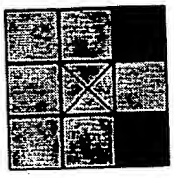


FIG. 14C

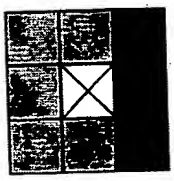


FIG. 14D

Rule 3

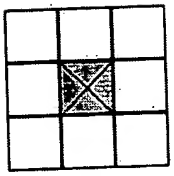


FIG. 14E

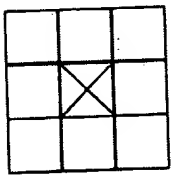


FIG. 14F